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Research Frontiers in Public Sector Performance Measurement

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Abstract

In “New Public Management” era, performance measurement has been widely used in managerial practices of public sectors. From the content and features of performance measurement, this paper aims to explore inspirations on Chinese public sector performance measurement, which based on a review of prior literatures including influential factors, methods and indicators of public sector performance evaluation. In the end, arguments are presented in this paper pointed out the direction of future researches in this field.

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Keywords: Public sector; Performance measurement; new public management; balanced scorecard

1. Introduction

As development of international economics and advances of technology are occurred in recent years, knowledge globalization and economic integration are strengthened. Meanwhile, international public sectors have made great progresses in a decade, which requires efficiency and output standards in line to private sectors to establish “elite standard”. However, there is a great gap between public and private sectors in the management of innovation. In addition, public sectors do not have a comparative advantage in terms of economic efficiency and social benefits, so that public sector managerial reform is urgently needed.

One important aspects of improvements of the new public management model is increasing the assessment of performance, which implementing departments’ goals and strategies on standards of the

performance appraisal. Public sector performance evaluation is to measure the situation achieving established goals - including the efficiency of changing resources into public goods and services (output), the quality of outputs (the quality of services they provide to their customers and customers' satisfaction), the results (the actual effects of behaviors compared to the target), and the efficiency of government operations during a process of achieving its planned goals.¹

Compared to traditional enterprise performance measurement, public sectors performance measurement shows two significant characteristics in the process of implementation and improvement: First, the multidimensional nature of measuring objectives. Public sectors not only have the economic attributes, but also bear on non-economic obligations of environmental benefits and social benefits, which needs to set performance targets to balance multiple objectives, multi-agent interests. Second, the lack of assessment data. Due to the lack of sophisticated management information system and the relative lack of continuity of data accumulations, when making the use of traditional performance evaluation methods, data collection is very difficult².

In response to these two characteristics, many foreign scholars have put forth ideas, methods, tools, and a lot of empirical researches for public sector performance measurement. Based on a literature review of foreign papers in the near future, this paper explores enlightenments on the domestic public sector performance appraisal from three aspects - the impact factors, methods and indicators of performance measurement.

2. Impact factors of public sector performance

2.1 External factors

1) *Service objectives / markets*: The public sector is unique, which means public sectors generally have multiple stakeholders and objectives. Stan Brignall and Sven Model extract three key factors-investors, customers and suppliers in stakeholders of public sectors³. Through overall management of organizations, the balance between the three can be maintained. Performance here can be extended for confirmation of the interests of different components in the organization. Stan Brignall and Sven Model argue that³, it is the overall management of the organization that maintains a balance between the three stakeholders' relations.

2) *Market shares and scales*: As advances in technology are appeared, public sectors need to catch up with the pace of technological developments, implementing the latest achievements of science and technology in the production and management. Above all, improving the technical efficiency, market shares and scales are the key. Sunil Kumar and Rachita Gulati analyze assessments and rankings of the technical efficiency of Indian banks from cross-sectoral perspectives⁴. Through the DEA analysis, it can be concluded that market shares and scales is one of the determinants of technical efficiency.

2.2 Internal factors

1) *Organizational goals and strategies*: According to targets, Organizations develop performance indicators, collect performance information, evaluate performance results⁵. Therefore, performance goals are the starting point of performance evaluations. Similarly, strategic planning and performance assessment also have a strong correlation⁶. Strategic management requires performance management not only focusing on results, but also concerning about the method; not only concerning about the short term, but also the long-term continuous improvement, innovation and learning.

General businesses' objectives are profit-based; but public sectors regard public interests of society as the main objectives - providing public goods and services to members of society, which determines the difference in the starting points of performance between enterprises and public sectors.

2) *Organizational types, structures and systems*: First, the type and structure of organizations influence performance levels. Christoph Kneiding and Paul Tracey quote Community Development Finance Institutions in the UK as an example⁷, pointing out that if its loan services is agent department, it should place social functions as orients; if it is major loaning institutions, it should place financial functions as orients; if departments focus on the customer market, it should place the dual functions-financial and social-as orients.

Second, the organizations' systems influence performance management approaches. In the new institutional economics, public sector managers only passively adapt to changes. The most recent public sector institutional reforms have a beneficial effect on using multiple indicators of performance management. Oliver assumes that the supporting organizational systems can greatly improve performance management behavioral initiative.⁸

3) *Organizational management level, organizational culture, high-level commitment, decision-making autonomy*: First of all, improving the organizational management level can increase public sector effectiveness. Roger Carrington, Nara Puthuchear and Deirdre Rose quote the New South Wales as an example⁹, finding that by improving the management level, the effectiveness of police patrols can be increased as well as competitiveness.

Second, the organizational culture can improve the cohesion, sense of belonging and spirit of teamwork in order to improve sector performance. In the output description of the fire station and performance evaluation studies of Henrik Jaldell¹⁰, team spirit is more important than the number of fire fighting, in terms of increasing the working efficiency of members.

Finally, the high-level commitment and decision-making autonomy have a positive effect on performance⁵. In the modern organizations, the psychological contract is increasingly being valued and respected by managers. Employees' distribution and organizational commitment are like the contract's ends. Only to balance the two, the contract would be valid. In public organizations, the appropriate delegation of authority does not mean that management will be confusing. In the growing knowledge-based professionals today, to increase the autonomy and diversity of jobs is a wise choice.

3. Evaluation methods of public sector performance

Public sectors can learn from part of successful management experience in private sectors to find suitable management methods. In the past researches, an evaluation method of public sector performance includes traditional methods and leading-edged methods. The traditional methods include the balanced scorecard and benchmarking method; leading-edged methods include systematic assessment based on AHP, in addition to DEA method. The specific details of this is below:

3.1 Benchmarking

Benchmarking method is to establish the internal or external benchmarks to learn and imitate, and finally reach or exceed the standard, and then establish a new benchmark. through the continuous establishment of benchmarks, enterprises constantly improve and progress. Benchmarking could be divided into two steps: first, to imitate, and then exceed.¹⁷

In the studies of benchmarking in principal-agent relationships of public sectors, the author points out that some companies have started using benchmarking, some need to be further improved the method. In short, the benchmarking has brought double beneficial effects for the principal and agent. In addition to performance improvement as the goal, a benchmark for other different objectives is also applied.

3.2 *Balanced scorecard*

Current strategic management research literatures show that, strategic planning and performance evaluation have strong ties. Balanced scorecard can be used to establish performance management systems - financial indicators, indicators of internal processes, innovation and learning indicators, community residents (customers) indicators. Strategic performance management is not only concerned about the results, but also concerned about the methods and processes; not only concerned about the short term, but also concerned about the long term; not only concerned about economic interests, but also concerned about the long-term continuous innovation, improvement and learning.¹⁸

The public sector, in particular, should promote the use of the balanced scorecard, since the public sector bodies have multiple interests and targets, often economic and social co-exist. In the balanced scorecard, community residents should be the highest weighted so as to distinguish between the public and private sectors.

3.3 *AHP-based method for the systematic assessment*

Tyrone M. Carlin applies a set of output-based budgeting and management methods, represented by the State of Victoria in Australia. Victorian public sector reporting high turnover, low survival and high innovation rate, is due to the lack of a systematic framework for statistical data: Statistics are rather chaotic; managers can not monitor the time series results; using the new method of statistical data, managers can not find nearly two years of data; there are only the data on the target, not the actual results; managers can not build a sequence of consecutive time performance.²

As mentioned above, public sectors have multiple stakeholders. Pursuing multiple goals is difficult to measure and compare performance. On the other hand, ignoring the correlation between targets is wrong, since establishment of performance indicators needs the linkages between targets. A multi-variable system equals to not only consider each target alone, but also consider their relevance. Some of the correlation between the objectives are complementary, others are commutative. Analytical Hierarchy Process (AHP) always divides the elements of decision-making into objectives, guidelines, programs and other levels, on which qualitative and quantitative analysis of decision-making is done¹⁴. AHP makes complex decision-making system hierarchical, through comparing the importances of the various associated factors layer by layer to prepare the quantitative basis for analysis and decision-making¹⁴.

3.4 *DEA*

Data envelopment analysis is to evaluate "input" data and "output" data of decision-making units. Input data refers to a certain amount consumed in the activities of decision-making units, for example, the total funds invested, the total labor input, the total area occupied, etc.; output data refers to a certain information reflecting effectiveness of the activities, after a certain input of decision-making units. DEA is a ratio that the output data of decision-making units divided by the previous input data, determining the relative effectiveness of the public sectors, to be used in performance evaluation for investment analysis⁹.

DEA method has the following advantages: different DEA models have its applicability - universal models plus the special nature of different models; the DEA model makes input and output data systematic; Using two rules - correlation with the rank and composition analysis - to select the input and output makes indicators comparable. We can fully acquire the risks and benefits information through DEA method, which is a good supplement of traditional ways of performance assessment.⁹

The same as other performance evaluation methods, ROI method also depends on the combination of daily management. There is no way to find a method to replace process management. Assessment

should only occupy 10%-20% of the time, more time is used to the performance improvement and planning.

4. Evaluation indicators of public sector performance

The choice of assessment indicators is difficult and important in performance appraisals, which should be focused on. In the past, the public sector assessment indicators remain unchanged - morality, ability, attendance and scores is the only criteria. Now, the market economy requires the public sector market-oriented, social-oriented, efficiency-oriented and effectiveness-oriented, for comparison with the private sector. With reforms of the public sector, reforms of indicators is on the agenda. From the economic indicators and non-economic indicators to analyze the choice of performance indicators, we put forward with a comprehensive evaluation of staff performance to cause the public sector to make profitable decisions.

4.1 Economic indicators

Certainty of economic indicators is high, is the most concerned performance indicator. Economic indicators include customer satisfactions, saving resources, production progress, stability and equity of resources allocation. Economic performance indicators are quantitative indicators, horizontally and vertically compared between economic situations of public sectors. In particular, the department can find "benchmarking" of the industry through the economic indicators, that is, the target of efforts, by the way of benchmarking to improve performance. In addition, the economic indicators of the data are easy to get. Data is quantified, so you can save and collect, be hard to criticize. Economic indicators are fair, easy to get the users' supports.¹⁹

Economic indicators have some shortcomings, needing for supplement and balance of non-economic indicators. Economic indicators can not determine the other goals in advance. Other objectives include the relevant ownership, purpose, management, and competition¹⁹. Other goals also depends on measuring them by quantitative or qualitative methods. In addition, the failure of concerning performance evaluation results, calls attention to the implementation of concerning performance appraisal process. Process management can terminate all the possible factors of the loss in advance, changing the large problems into the small. Adjustments, incentives and other means finally determine the performance results, but also reflect the enterprises' management level¹⁹.

4.2 Non-economic indicators

1) *Performance objectives*: Organizational goals can be refined into performance goals. Through the assessment, performance goals and employee performances are linked to enable enterprises to continuously upgrade and improve.²⁰ the performance goals is the refinement and decomposition of organizational goals, while individual performance objectives are needed to be developed in consultation with individual employees. On the one hand, to complete the organization's goals; the other hand, to be in line with their career needs. It is good management that not only concerned with the overall interests of the public sector, but also concerned about individual interests.

2) *Behavioral indicators*: In terms of results of performance, behavioral indicators are defined, such as attendance, effort and quality of service. Behavioral indicators are mostly not quantitative.²⁰ factor scoring method, graphic appraisal method and behaviorally anchored rating scale are concerned about the behaviors and personal characteristics of staff. In this regard, the choice of evaluators is very important, since it directly determines the validity of the assessment.

Second, in the market economy environment, the public sector should be market-oriented, while

market efficiency can be used in the public sector. Market requirements of the public sector are to do three criteria: to improve the quality of services; to change attitudes and approaches; to put forward reasonable and useful suggestions²¹. It can be seen that these three criteria are not only the requirements of the economy, but also the reflectments of social values. Efficiency is a measurement of social responsibility as well.

Finally, under environmental advocacies, the public sector as a representative of the public interest and the exercise of state powers, should control environmental pollution, improve the ecological environment, protect natural resources and adhere to sustainable development in the production process.²¹

5. Conclusions and discussion

Through the review of most of the post-2001 foreign literatures on performance evaluation, impact factors, evaluation methods and indicators of public sector performance are classifiedly analyzed. Through the consolidation of foreign literatures, we sum up the following inspirations on Chinese public sector performance evaluation:

First, under the market economy, Chinese public sectors are required to be market-oriented, manage more autonomically. Chinese public sectors can learn from private sector management techniques and methods, but can not ignore the social responsibilities of the public sector.

Second, the characteristics of the public sector itself, determine that its goals and targets of assessments are multiple. You can use the balanced scorecard and the DEA analysis in Chinese public sectors, and find input and output indicators suitable to their own organizations, which is the key to success.

Third, performance appraisals need the co-operation between human resource management departments and IT departments. Improvements in technology depend on the introduction of personnel and equipment in IT departments. Chinese public sectors lack key technologies and personnel. Thus, the improvement of management level is not just the responsibility of human resource management departments, but various departments and individuals.

Meanwhile, the existing literatures also show that, relative to overall level of the studies of enterprises' performance evaluation, there are obvious problems in the studies of public sector performance evaluation in the following deficiencies:

First, the establishment of appraisal standards is a problem. Several objectives of public sector management has led the establishment of quantitative assessment criteria easily comparing to be a very difficult thing. In the study of domestic public sector performance evaluation, the theories of foreign public sector management should not be a simple copy.

Second, the public sector has unique properties - no income, no hard targets, several clients, limited problem solving methods. According to features of the public sector, the existing management styles of the private sector can not solve it, only to re-establish standards.

Finally, the technology of public sectors lays behind. Information system problems and the problem of choices and explanations of performance indicators constitute obstacles to implementation of public sector performance system. In the future, the public sector reforms are to bring in technology, equipment and personnel, to promote information technology of management. How to realize information technology of public sector management, will be the focus of future research.

The reason why performance evaluations of the public sector are attached more and more attentions is that the public sector bears the major social responsibilities and obligations. Meanwhile, "new public management" requires public sectors to be more market-oriented to change negative "no income" impression. To achieve these twin objectives, we must apply balanced, systematic assessment model. Researchers of public sector performance measurement should conduct more theoretical and empirical researches, to enrich and improve the existing mechanisms to better guide the practice.

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